

ANTREX Electronics

Electronic Components Sourcing Information

Product Reference Information

Part Number: CYAT837AZA77-42002
Manufacturer: Infineon Technologies
Package: 128-LQFP
Availability: Please confirm with sales

Product Page:

<https://antrexco.com/product/details/infineon-technologies/cyat837aza77-42002.html>

Request a Quote:

[Submit RFQ for this part](#)



Scan for product page

Contact Information

Email: info@antrexco.com

WhatsApp: +86-186-8066-5326

Website: <https://antrexco.com>

Quality & Trust

New & Original Components

Supplier verification and packaging condition review

CoC / RoHS / REACH documents available on request

Secure sourcing support for OEM / EMS projects

Note:

This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.

PSoC™ Automotive Multitouch Generation 7XL Multichip

Datasheet Summary

Note that this is a Summary Datasheet. To access the full version of this datasheet, register in [My Infineon Collaboration Platform \(MyICP\)](#).

Features

- Automotive Electronics Council (AEC) AEC-Q100 qualified
- Multi-chip capacitive touchscreen controller
 - 32-bit Arm® Cortex® CPU
 - Register-configurable
 - Noise-suppression technologies for display and EMI
 - Effective 20-V drive for higher signal-to-noise ratio (SNR)^[1]
 - AutoArmor improves both electromagnetic emissions and immunity
 - Water rejection and wet-finger tracking using DualSense
 - Multitouch glove with automatic mode switching
 - Ten fingers with thin glove (≤1-mm thick)
 - Two fingers with thick glove (≤5-mm thick)
 - Fingernail tracking
 - Large object rejection
 - Automatic baseline tracking to environmental changes
 - Field upgrades via bootloader
 - Manufacturing test kit (MTK)
 - Android driver support
 - Touchscreen sensor self-test
- System performance (configuration dependent)
 - Screen sizes up to 35-inch diagonal
 - 6-mm electrode pitch; 16:10 aspect ratio
 - Up to 296 sense pins, 10320 intersections
 - Reports up to ten fingers
 - Small finger support down to 5 mm
 - Refresh rate up to 120 Hz; other rates configurable
 - TX frequency up to 150 kHz
 - 5-V TX with high-order multi-phase TX capability for higher signal-to-noise (SNR) ratio
 - Integrated DSP to process and filter data for faster scanning and lower noise
 - 192 channels, each with its own ADC, to enable single-pass long-side scanning for faster processing of touch data and better noise filtering
- Power (configuration-dependent)
 - 1.71 to 1.95 V and 3.0 to 5.5 V logic and digital I/Os supply
 - 3.0 to 5.5 V analog supply
 - 260 mW for 3-chip solution
 - 174 mW for 2-chip solution

Notes

1. Effective voltage when using 17 multi-phase TX and 5-V VCCTX supply.

Features

- Sensor and system design (configuration-dependent)
 - Supports a variety of touchscreen sensors and stackups
 - Manhattan, diamond
 - Sensor-on-lens (SOL)
 - Plastic (PET) and glass-sensor substrates
 - LCD, AMOLED, and IPS displays
 - Metal mesh
- Primary host communication interface
 - I²C slave rates at 100 kbps, 400 kbps, and 1 Mbps
- Packages
 - 100-pin TQFP 14 × 14 × 1.4 mm (0.5-mm pitch)
 - 128-pin TQFP 14 × 20 × 1.4 mm (0.5-mm pitch)
- Ambient temperature range
 - Automotive-A: -40°C to 85°C
 - Automotive-S: -40°C to 105°C

1 Ordering information

The following table lists the CYAT837X/847X (multi-chip) touchscreen controllers^[2].

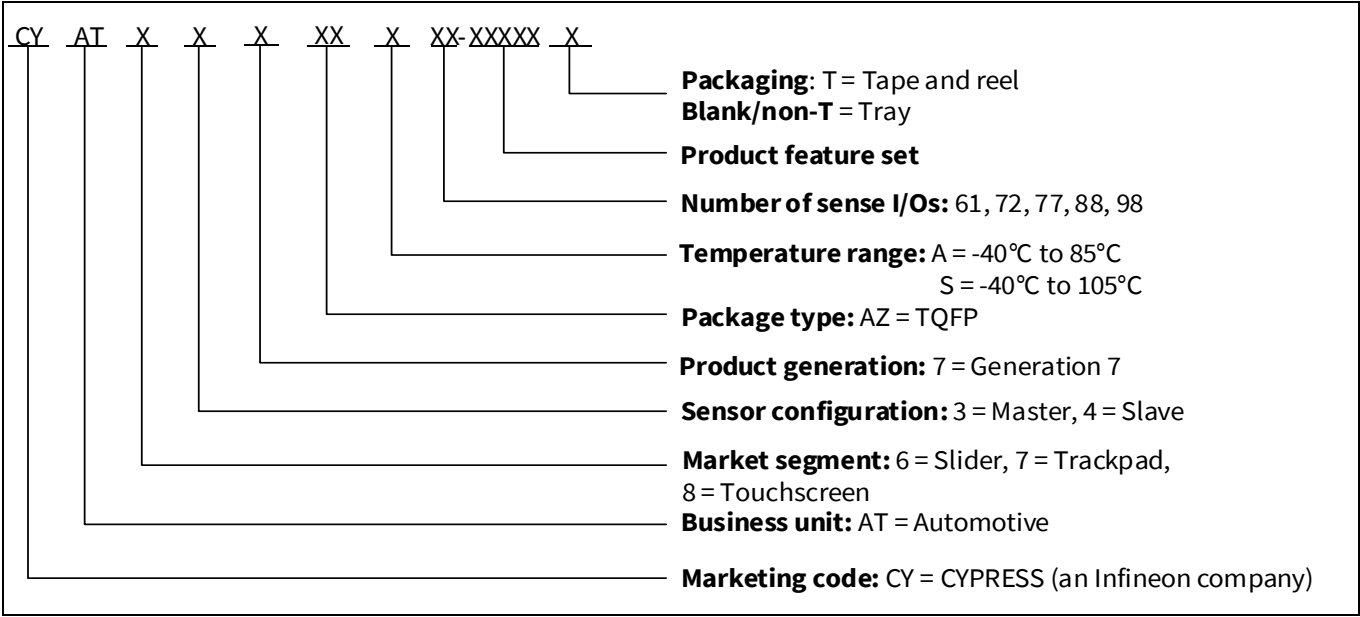
Table 1 **Ordering information**

MPN	Number of pins	128-pin TQFP	100-pin TQFP	Multi-touch	Glove	H2O	Package
CYAT837AZA98-42002	98	✓	–	✓	✓	✓	128-pin TQFP
CYAT837AZS98-42002	98	✓	–	✓	✓	✓	128-pin TQFP
CYAT847AZA98-42002	98	✓	–	✓	✓	✓	128-pin TQFP
CYAT847AZS98-42002	98	✓	–	✓	✓	✓	128-pin TQFP
CYAT837AZA88-42002	88	✓	–	✓	✓	✓	128-pin TQFP
CYAT837AZS88-42002	88	✓	–	✓	✓	✓	128-pin TQFP
CYAT847AZA88-42002	88	✓	–	✓	✓	✓	128-pin TQFP
CYAT847AZS88-42002	88	✓	–	✓	✓	✓	128-pin TQFP
CYAT837AZA77-42002	77	✓	–	✓	✓	✓	128-pin TQFP
CYAT837AZS77-42002	77	✓	–	✓	✓	✓	128-pin TQFP
CYAT847AZA77-42002	77	✓	–	✓	✓	✓	128-pin TQFP
CYAT847AZS77-42002	77	✓	–	✓	✓	✓	128-pin TQFP
CYAT847AZA72-22002	72	–	✓	✓	✓	✓	100-pin TQFP
CYAT847AZS72-22002	72	–	✓	✓	✓	✓	100-pin TQFP
CYAT847AZA61-22002	61	–	✓	✓	✓	✓	100-pin TQFP
CYAT847AZS61-22002	61	–	✓	✓	✓	✓	100-pin TQFP

Notes

- All devices have the following base features: Water rejection, DisplayArmor, AutoArmor, DualSense, glove support, and large object detection and rejection.

1.1 Ordering code definitions



Revision history

Revision history

Document revision	Date	Description of changes
**	2022-07-26	Initial release.

Trademarks

All referenced product or service names and trademarks are the property of their respective owners.

Edition 2022-07-26
Published by
Infineon Technologies AG
81726 Munich, Germany

© 2022 Infineon Technologies AG.
All Rights Reserved.

Do you have a question about this document?

Go to www.infineon.com/support

Document reference
002-35956 Rev. **

IMPORTANT NOTICE

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics ("Beschaffenhheitsgarantie").

With respect to any examples, hints or any typical values stated herein and/or any information regarding the application of the product, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

In addition, any information given in this document is subject to customer's compliance with its obligations stated in this document and any applicable legal requirements, norms and standards concerning customer's products and any use of the product of Infineon Technologies in customer's applications.

The data contained in this document is exclusively intended for technically trained staff. It is the responsibility of customer's technical departments to evaluate the suitability of the product for the intended application and the completeness of the product information given in this document with respect to such application.

For further information on the product, technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies office (www.infineon.com).

WARNINGS

Due to technical requirements products may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by Infineon Technologies in a written document signed by authorized representatives of Infineon Technologies, Infineon Technologies' products may not be used in any applications where a failure of the product or any consequences of the use thereof can reasonably be expected to result in personal injury.